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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,011	10/10/2001	Laurence Hamid	12-70 US	4760

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FREEDMAN & ASSOCIATES  
117 CENTREPOINTE DRIVE  
SUITE 350  
NEPEAN, ONTARIO, K2G 5X3  
CANADA

EXAMINER

LAROSE, COLIN M

ART UNIT PAPER NUMBER

2623

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/973,011	<b>Applicant(s)</b> HAMID, LAURENCE	
	<b>Examiner</b> Colin M. LaRose	<b>Art Unit</b> 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-18 is/are allowed.
- 6) ☒ Claim(s) 1-3, 11 and 19 is/are rejected.
- 7) ☒ Claim(s) 4-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Arguments and Amendments***

1. Applicant's amendments and arguments filed 22 December 2004, have been entered and made of record.

### ***Response to Amendments and Arguments***

2. Applicant's remarks have been considered. In view of Applicant's remarks, the previous rejections under 35 USC § 112 have been withdrawn. In view of Applicant's amendments to independent claims 1, 11, 13, and 19, new grounds of rejection and/or new interpretations of previously applied reference(s) appear below.

### ***Drawings***

3. Missing figure 7(d) has been received and place in the file.

### ***Claim Objections***

4. Claim 20 is objected to because of the following informalities: The claim should be designated as "cancelled" rather than "withdrawn". The "withdrawn" status identifier is reserved for non-elected claims that are withdrawn from consideration. Here, it appears that claim 20 has been cancelled and not withdrawn. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 3 and 4 recite the limitation "predetermined acquisition parameter". There is insufficient antecedent basis for this limitation in the claim. For examination purposes, this feature is deemed to correspond to the "physical parameter" of claim 1.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-3, 11, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,185,318 by Jain et al. ("Jain").

Regarding claim 1, Jain discloses a method (figures 2 and 6) for fingerprint authentication comprising:

- a) acquiring an image of a fingertip of an individual (210, figure 2);
- b) processing the image to determine a value indicative of a physical parameter of the fingertip, the physical parameter affecting the acquired image and independent of the identity

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of the individual (figure 6: Jain determines the skew of the imaged fingertip in terms of rotation and translation; the skew of the fingertip represents a physical parameter of the fingertip at the time of imaging that affects the orientation of the acquired image; the skew parameters are also independent of the individual in that the skew values do not determine the identity of an individual);

c) comparing the image to a stored biometric template, the comparison process based on the determined value (620-640, figure 6: the image of the fingertip I'' is compared to a template T'' based on the determined skew values – that is, I'' and T'' are aligned using the skew values, and the comparison is effected on the basis of the de-skewed images); and

d) performing one of an authentication and a rejection in dependence upon the comparison (260, figure 2).

Regarding claim 2, Jain discloses the comparison process is selected based on the determined value, the comparison process involving different image processing steps for different determined values (620-640, figure 6: the image of the fingertip I'' is compared to a template T'' based on the determined skew values – that is, I'' and T'' are aligned using the skew values, and the comparison involves different de-skewing processes for different rotation and translation values).

Regarding claim 3, Jain discloses the determined value is quantitatively indicative of the predetermined acquisition parameter (i.e. the rotation and translation values are quantitative indications of the skew of the imaged fingertip).

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Regarding claim 11, Jain discloses a method (figures 2 and 6) for processing a fingerprint image comprising:

- a) acquiring an image of a fingertip of an individual (210, figure 2);
- b) processing the image to determine a value indicative of a physical parameter of the fingertip, the physical parameter affecting the acquired image and independent of the identity of the individual (figure 6: Jain determines the skew of the imaged fingertip in terms of rotation and translation; the skew of the fingertip represents a physical parameter of the fingertip at the time of imaging that affects the orientation of the acquired image; the skew parameters are also independent of the individual in that the skew values do not determine the identity of an individual); and
- c) selecting an image-processing process in dependence upon the determined value, the image-processing process for removing a subset of features of the acquired image (620, figure 6: based on the skew values (r) and (t), an appropriate de-skewing process is selected and effected in order to remove the skew of the acquired image).

Regarding claim 19, Jain discloses a system (figure 5) for fingerprint authentication comprising:

- a sensing area (580) for capturing an image of a fingerprint of an individual presented thereto;
- a memory storage area (530) for storing captured images therein; and
- a processor (515) for executing code thereon to process the captured image to determine a value indicative of a physical parameter, the physical parameter affecting the acquired image an

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independent of the identity of the individual (figure 6: Jain determines the skew of the imaged fingertip in terms of rotation and translation; the skew of the fingertip represents a physical parameter of the fingertip at the time of imaging that affects the orientation of the acquired image; the skew parameters are also independent of the individual in that the skew values do not determine the identity of an individual), and to compare the captured image to a template image according to an image-processing process selected in dependence upon the determined value (620-640, figure 6: the image of the fingertip I'' is compared to a template T'' based on the determined skew values – that is, I'' and T'' are aligned using the skew values, and the comparison is effected on the basis of the de-skewed images).

***Allowable Subject Matter***

10. Claims 6 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 4, 5, and 7-10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Regarding claims 4 and 12, Jain teaches that the physical parameter is the skew/orientation of the imaged finger rather than the moisture or pressure of the finger, a claimed. [Claims 5 and 7-10 depend from claim 4 and are allowable for the same reason.]

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Regarding claim 6, Jain does not teach selecting a template for comparison based on the skew values, as claimed. Rather, Jain's templates are merely altered, not selected, based on the skew values.

12. Claims 13-18 are allowed.

Regarding claim 13, Jain does not appear to disclose step (d), in combination with the other claimed steps. Similar to claim 6, Jain does not teach or suggest selecting a template for comparison based on the skew values, as claimed. Rather, Jain's templates are merely altered, not selected, based on the skew values.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au, can be reached on (571) 272-7414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CML  
Group Art Unit 2623  
6 June 2005



VIKRAM BALI  
PRIMARY EXAMINER